

JACK MARKELL GOVERNOR JENNIFER COHAN SECRETARY

#### VIA OVERNIGHT DELIVERY

(302) 760-2030 FAX (302) 739-2254

June 16, 2016

Contract No. T201407501.01 Removal of BR 2-357P Pedestrian Bridge over St. Jones River Kent County

Ladies and Gentlemen:

Enclosed is Addendum No. 1 for the referenced contract consisting of the following:

- 1. The Bid Proposal Cover, revised, to be substituted for the same page in the Proposal.
- 2. One (1) page, Table of Contents, page iv, revised, to be substituted for the same page in the Proposal.
- 3. Twenty Eight (28) pages, Special Provision 605533-Cleaning Existing Steel Structures, Hazardous Base, (L.S.), pages 13-40, have been deleted from the Proposal.
- 4. Four (4) pages, Bid Proposal Forms, pages 1-4 revised, to be substituted for the same pages in the Proposal. Item Number 605533 has been deleted.
- 5. Expedite File, Addendum No. 1.

Please note the revision listed above and submit your bid based upon this information.

Sincerely,

signature on file

Robert A. Kovacs Competitively Bid Contracts Coordinator

# STATE OF DELAWARE



# DEPARTMENT OF TRANSPORTATION

# **BID PROPOSAL**

# for CONTRACT <u>T201407501.01</u>

## REMOVAL OF BR 2-357P PEDESTRIAN BRIDGE OVER ST. JONES RIVER

KENT COUNTY

ADVERTISEMENT DATE: May 23, 2016

COMPLETION TIME: 68 Calendar Days

SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION DELAWARE DEPARTMENT OF TRANSPORTATION AUGUST 2001

Bids will be received in the Bidder's Room at the Delaware Department of Transportation's Administration Building, 800 Bay Road, Dover, Delaware until 2:00 P.M. local time <u>June 21, 2016</u>

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#### 605533 - CLEANING EXISTING STEEL STRUCTURES, HAZARDOUS BASE (L.S.) 605629 - CLEANING EXISTING STEEL STRUCTURES, HAZARDOUS BASE (S.F.)

#### **Description:**

This work consists of cleaning the entire existing steel structure(s) or a part of it as noted on the Plans; collection; stabilization; and transportation of the "spent material" (rust particles, paint particles and dust, material assumed to be hazardous waste), resulting from cleaning operations, to an approved disposal site(s). The work under this item shall be performed in accordance with these Special Provisions and attached Appendix A.

Prior to the beginning of paint removal work, the Contractor shall set forth in detail and submit to the Delaware Department of Transportation (hereinafter referred to as Department), for approval, the proposed containment system (mini-containment system when only a part of the structure is to be cleaned as required) for complete capture, containment, collection and disposal of the "spent material" generated from paint removal work and testing by an outside laboratory, approved by the Department. The system shall be in compliance with these specifications, State, United States Environmental Protection Agency (EPA) and Occupational Safety and Health Act (OSHA) and other regulatory agencies with jurisdiction, rules, regulations, standards and guidelines in effect while the work is in progress. Upon approval, the plan shall be implemented to capture, contain, collect, and dispose of all "spent material".

The Contractor shall not begin cleaning and/or blasting operation until he/she has submitted final documentation that he/she has an approved disposal site and permits for the handling, storing, and transporting of hazardous waste and nonhazardous waste; and shall be responsible to protect the environment, workers, and the public from toxic substances resulting from the paint removal operations.

#### **Pre-Bid Conference:**

Prior to the bid opening, a date will be set if deemed necessary by the Contract Administration (bidder will be notified at the time of purchasing contract documents) for a pre-bid conference to alert the potential bidder to comply with the directives established by the OSHA, EPA and the State of Delaware during and after the execution of this item. It is recommended that the bidder (Prime Contractor) brings his/her Sub-Contractor to be engaged in removing the paint if he/she cannot perform the work of this item.

#### **Materials**:

The Contractor shall use recyclable metallic shot and metallic grit meeting the requirements of SSPC AB2 and SSPC AB3 as abrasive materials for removing paint.

Other removal and cleaning methods after approval may be used by the Contractor provided he/she can demonstrate that the proposed method satisfies all the safety and environmental requirements of this specification and provides a cleaned surface satisfactory to the Engineer.

#### **Construction Requirements:**

#### Containment System:

Prior to commencing any cleaning operations, the Contractor shall prepare a Cleaning Contaminant System for the capture, containment, collection and storage of the waste generated by the work, which includes abrasive blasting residue, spent blasting mediums, rust, paint particles, dust, etc.

The Containment System must be capable of containing the waste and resulting residue generated by the work. The Contractor shall strive to achieve total containment (100%); and is required to meet all Federal, State, City and Local regulations using the best available technology as applicable to each bridge site. The Containment System shall meet the requirements of SSPC Guide 6, Class 1A. Visible emissions in excess of SSPC Guide 6, Level 1 (one percent in the work day) shall be cause for immediate shut down until corrections are made. While on the site, tarps shall be held securely in place, and kept sealed at all times during water blasting, paint removal and painting.

For bridges over water, the Containment System shall include a skimming boom consisting of a float with a skirt to collect floating debris. Also, an approved capturing device such as floating curtain, screen or tarp shall be placed under and down wind of the bridge to catch rust, sand and paint particles; and the waste material collected on the capturing device shall be cleaned daily.

Prior to commencing work the Contractor must submit working drawings of the proposed containment system to the Department within 14 days from Notice of Award. The Department will review the drawings and evaluate the system as to its effect on the loading capacity of the existing structure. The Contractor shall also submit the design of the systems to be employed, including an analysis of the dead, live and wind loads which will be added to the existing structure by the containment system and blast waste. The load analysis shall be performed and stamped by a licensed Professional Engineer registered in the State of Delaware and experienced in bridge analysis. The analysis shall assure that the system will not induce a load on the bridge which will create an overstress condition or otherwise effect the structural integrity of the bridge. For bridges 23 feet (7 meters) or greater in height, the containment system submittals shall include a safety net meeting OSHA requirements in 29 CRF 126.106, and 29 CRF 126.104. For bridges less than 23 feet (7 meters) in height, the submittals shall include necessary safety measurements such as safety harnesses, lifelines and lanyards meeting OSHA requirements in 29 CRF 126.104. In no case shall the containment system, safety devices, or equipment encroach upon the minimum bridge clearances shown on the Plans, unless otherwise approved by the Engineer.

The following guidelines shall be followed by the Contractor in preparing the Containment Drawing Plans. However, the Contractor may submit for approval a self-contained and self supporting blast and recovery system as an alternative option for removing the paint:

- 1. Working drawings with Professional Engineer Seal shall be submitted by the Contractor meeting the requirements of Subsection 105.04 of the Standard Specifications.
- 2. The working drawings shall show Containment System in plan & elevation views including details of clips and hangers.
- 3. The working drawings shall indicate maximum permissible load of abrasive or waste permitted on the Containment System.
- 4. The working drawings shall indicate if vehicles with abrasive and waste will be permitted on the bridge; if so indicate allowable load and locations. Vehicle and equipment loads may not be permitted behind abutments if surcharging results.
- 5. The working drawings shall indicate all restrictions on bridge including any load posting.
- 6. Permanent attachments or fasteners to the bridge will not be permitted.
- 7. The working drawings shall show the location(s) of skimming boom(s) if the bridge is over water.
- 8. The working drawings shall identify all containment system components; and shall indicate all rigid framework, work platform and scaffolding.
- All curtains, screens or tarps used for containment shall be weighted down.
- 10. No load shall be attached to the bridge railings unless railing is in good condition, and details and calculations showing loading are approved by the Department.

With submission of the Containment System Drawing, the Contractor shall be required to develop and submit for approval an Effective Safety Program to be followed during the paint removal period. The Contractor's employees, before being engaged in paint removal work, must have proper training in accordance with the OSHA General Industry Standard.

The review and acceptance of the working drawings by the Department shall in no way relieve the Contractor of any responsibility for obtaining the required degree of capture, containment and collection.

Cleaning of Containment System must be properly maintained while work is in progress and shall not deviate from the approved working drawings without prior approval of the Engineer. Air within the containment structure shall be exhausted rapidly to maintain a slight negative pressure, so that outside air is drawn in through specifically designed openings rather than having contaminated air leaking from inside the containment. Also, sufficient fresh air must be circulated so that dust is reduced to enable good visibility for the operator. Public access to all rigging, scaffolding and the containment systems must be denied at all times.

#### Air Monitoring for PM 10 and TSP Lead:

The intent of the monitoring requirements in this specification is for the Contractor to establish a baseline background reading for the area(s) in proximity to steel cleaning. This specification also requires the Contractor to perform all of the testing required to ensure that lead particles are adequately contained and captured by the Contractor's steel cleaning operations. All costs associated with this work are included in the Contractor's bid price.

The Contractor shall engage a consultant responsible for conducting air monitoring work during the operation of the paint removal period; monitoring shall be conducted on the area downwind of the lead control area. The qualification of the consultant shall be approved by the Department prior to his/her engagement in air monitoring service. The air quality standard shall be monitored in accordance with National Ambient Air Quality Standards (NAAQS). At a minimum this containment system shall achieve a SSPC level 1 Standard Emissions level.

Baseline Monitoring shall take place at each structure where the Contractor is required to clean the existing steel in order to establish preconstruction background readings for the area(s) involved. Baseline Monitoring shall occur for a minimum of 3 consecutive calendar days before the steel cleaning begins. The Contractor shall conduct the monitoring so that the monitored hours match the proposed work schedule for the contract, including nightwork. The minimum duration of the monitoring for each calendar day must be 8 hours, regardless of the Contractor's proposed work schedule. The required sampling type shall be 2 (two) PM-10 and 2 (two) TSP-Lead and the Engineer must approve the locations of the sampling. During lead paint removal, air monitoring shall commence just prior to the start of any lead removal operation and shall continue whenever the contractor is cleaning steel under this item. The required sampling type shall be PM-10 and TSP-Lead and the Engineer must approve the locations of the sampling. If problems with containment occur, the Engineer will require the air monitoring to be reinstalled at the Contractor's expense.

The acceptance level for PM 10 (particles with an aerodynamic diameter less than or equal to a nominal 10 micrometers) shall be 150 micrograms per cubic meter of air for 24-hour average concentration (450 micrograms per cubic meter of air over an eight-hour period assuming no emissions occur from the project for the remaining 16 hours).

The acceptance level for Total Suspended Particulate Matter (TSP) lead emissions shall be 1.5 micrograms per cubic meter of air averaged over a calendar quarter of the year, which can be converted as noted below to achieve daily lead level allowance during the project operation.

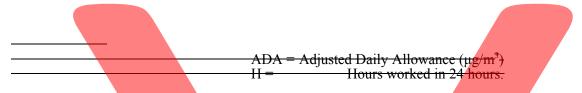
$$DA = \frac{90}{PD}x1.5\mu g/m^3$$
, where

 $DA = Daily Allowance (\mu g/m^3)$ 

PD = Number of paint removal operation days anticipated in a 90-day period.

For example, if it is expected that 30 days out of 90 will be worked, the TSP lead emission criteria for each of those days would be 4.5 µg/m³, over a 24-hour period (90/30 x 1.5). However, since the paint removal operation will not continue for the full 24 hours, this level of emissions can be increased using the following formula:

$$ADA = DAx \frac{24}{H}$$
, where



Using the above example, if the paint removal operation is continued for eight hours out of each 24-hour workday, the ADA will be 13.5 μg/m³ (4.5 μg/m³ x 24/8). Thus, 13.5 μg/m³ could be emitted during the eight hours of work, provided no emissions occur during the remaining 16 hours.

The size of the containment system shall be a work area approximately equivalent to what a work crew can blast clean, inspect, paint and move in a 24 hour period. The Engineer may permit a larger containment system if the Contractor can demonstrate that such a system will increase productivity and not interfer with the flow of traffic. When dust leaks are noted in the containment system, repairs shall be made as soon as possible:

If at any time during the execution of the work, the cleaning containment system fails to function at the required level of efficiency, the Contractor must immediately suspend all operations except those intended to minimize the adverse impact to the environment. Operations shall not resume until modification have been made to correct the cause of the failure.

The Contractor shall have a full time hygienist on the job site during lead paint removal activities to insure required hygiene procedures are being followed.

#### **Cleaning:**

All structural steel surfaces shall be cleaned and free of all rust, rust scale, mill scale, paint or other foreign matter in accordance with the requirements of SSPC-SP10.

Should the Contractor elect to use wet or water-vapor sandblasting, the water shall contain 0.32 percent of sodium nitrate and 1.28 percent by weight of ammonium phosphate for the purpose of inhibiting the development of rust.

No visible lead containing residue, debris, or paint chips shall remain or be present outside the containment area upon the completion of the abatement cleanup. Visible lead containing residue, debris, or paint chips outside the containment area shall be cleaned up immediately.

The type of containment systems used when cleaning steel shall be Class 1A for abrasive blasting and Class 2P for Power Tool Cleaning as per SSPC - Guide 6 "Guide for Containing Debris Generated During Paint Removal Operations".

#### Collection, Storage and Disposal of Hazardous and Non-Hazardous Waste:

All waste discharged and collected from the Containment System must be protected in a manner so as to prevent migration of the waste into the environment; and the Contractor shall abide by all Federal and State regulations relating to collection, storage and disposal of the hazardous waste and solid waste.

The Contractor shall provide a clean up area with soap, water and container for collection and disposing of the hazardous waste at each work site. The Contractor shall obtain a permit for hauling the hazardous waste from the State Department of Natural Resources and Environmental Control (DNREC).

Each day the Contractor shall collect and contain waste material in sealed 55 gallon (208 liter) open head type drums (I.C.C. Specification 17-H). All drums shall be in new condition and approved for use by the Engineer. Drums shall be labeled with the words "HAZARDOUS WASTE" and tagged in accordance with all State regulations including bridge number, Contract number, Contractor's name, contents and the date when waste accumulation in the drum begins. No more than 29 drums of hazardous material shall be kept at the site of each bridge.

The waste to be placed in drums also includes all filters used in abrasive blasting equipment and vacuum power tools for removing hazardous and nonhazardous paint waste; these filters shall be removed when the Contract is complete. At the end of the Contract all such filters shall be removed from equipment used on the project and placed in drums with other hazardous waste for proper disposal.

At the end of each working day the Contractor shall haul the waste material contained and collected to an approved temporary secure accumulation site. This site must be approved by the Engineer and be maintained in a secured condition by the Contractor. Hauling of hazardous waste must be performed by a license hauler.

The accumulation site must be capable of preventing the migration of the lead contaminated waste material into the environment. The accumulation area must also provide protection from vandalism and unauthorized access by the general public. At the completion of the work and in the presence of the Engineer, the Contractor shall take representative samples of the accumulated residues collected at each bridge.

The storage site must be capable of preventing the migration of the lead contaminated waste material into the environment. The storage area must also provide protection from vandalism and unauthorized access by the general public. At the completion of the work, the Contractor shall take representative samples of the accumulated residues collected at each bridge to be analyzed for lead content.

Samples exceeding 5 PPM (parts per million) according to the Toxicity Characteristics Leaching Procedure (TCLP) test shall be considered a hazardous waste and disposed of as hazardous waste. If the sample's toxicity level has dropped to 5 ppm or less, then the waste can be transported and disposed of as industrial waste, provided it is stabilized.

In order to stabilize the industrial waste (below the toxicity level), a slurry made from Portland Cement (10% of waste by volume) and water (50% of cement by volume) shall be added to the waste and thoroughly mixed at the disposal site by the licensed hazardous waste hauler. In no case shall blasting debris or dust collector waste be directly disposed of as an industrial waste. They shall either be stabilized or disposed of as a hazardous waste, irrespective of the results of the TCLP Test.

The samples shall be delivered to a laboratory approved by the Department for testing according to the Toxicity Characteristic Leaching Procedure (TCLP). Should test results indicate and if the contaminants listed in the following are above their respective regulatory limits, the residue shall be deemed a hazardous waste, and must be treated before disposal.

EPA HAZARDOUS	CONTAMINANT	<del>CAS NO.</del>	REGULATORY
WASTE NO.			LEVEL (mg/L)
<del>D004</del>	Arsenic	<del>7440-38-2</del>	5.0
<del>D005</del>	<del>Barium</del>	<del>7440-39-3</del>	100.0
<del>D006</del>	<del>Cadmium</del>	<del>7440-43-9</del>	1.0
<del>D007</del>	Chromium	<del>7440-47-3</del>	5.0
<del>D008</del>	<del>Lead</del>	<del>7439-92-1</del>	5.0
<del>D009</del>	Mercury	<del>7439-97-6</del>	0.2
<del>D010</del>	Selenium	<del>7782-49-2</del>	1.0
<del>D011</del>	Silver	<del>7440-22-4</del>	5.0

The Contractor shall remove from the accumulation site all treated waste within 90 days from the date of accumulation; and be transported to an industrial dump facility approved by the Delaware Department of Natural Resources and Environmental Control for disposal of such waste. A copy of the completed waste manifest (signed and dated by the Contractor and the Engineer at the site) shall be forwarded to the Department.

#### **Method of Measurement:**

For item 605533, the quantity of cleaning existing steel structures will not be measured. For item 605629, the quantity of cleaning existing steel structures will be measured by the square foot (square meter) of area cleaned and accepted.

#### **Basis of Payment:**

For item 605533, the quantity of cleaning existing steel structures will be paid for at the Contract lump sum. For item 605629, the quantity of cleaning existing steel structures will be paid for at the Contract unit price per square foot (square meter).

Price and payment shall constitute full compensation for furnishing and installing all materials, working drawings and Professional Engineer's service, Containment System, collection and temporary storage of the waste material as required, air monitoring service including consulting services, testing materials for contaminants, cleaning the structure, revisions and resubmissions of the Containment Plan and or Systems that may be required during the execution of the work, for providing respiratory protection and protective clothing to the worker and Departments employee at the time of inspection, hygiene facilities, for stabilizing the hazardous material and transporting and disposing of the stabilized waste complying with all the requirements as described herein in these special provisions, for all labor, equipment, tools and necessary incidentals to complete the work.

#### **NOTE**

The latest issue, revision, or amendment of the references noted below shall govern in execution of this item unless otherwise noted. If there is a conflict between the attached Appendix A of this Special Provisions and the references noted below, the latter shall prevail.

#### 1. Steel Structures Painting Council (SSPC) Standards

SSPC-AB2	Specification for Cleanliness of Recycled
	Ferrous Metal Abrasive
SSPC-AB3	Specification for Newly Manufactured Steel Abrasive.
— SSPC-QP-1	Standard Procedure for Evaluating Qualifications of Painting
331 C-Q1 1	Contractors
SSPC Guide 6I	Guide for Containing Debris Generated During Lead Paint
SSI C Guide of	Removal Operations
SSPC Guide 7 (DIS)	Guide for the Disposal of Lead-Contaminated Surface Preparation
SSI C Guide / (DIS)	Debris

#### 2. U.S. Government Code of Federal Regulations

- 29 CFR, Part 1926.62, Safety and Health Regulations for Construction
- 40 CFR, Subchapter I, "Solid Wastes" (parts 260-263, and 268)

#### 3. American National Standards Institute (ANSI)

ANSI/ASC Z9.4 For Exhaust Systems Abrasive Blasting Operations -- Ventilation and Safe Practice

#### 4. State of Delaware

- 7 Del. C., chapter 63 Hazardous Waste Management Act
- The Delaware Regulations Governing Hazardous Waste (DRGHW)
- 7 Del. C., Chapter 60 Delaware Water and Air Resources Act
- The Delaware Regulations Governing Solid Waste (DRGSW)

#### **SPECIAL NOTICE TO CONTRACTORS**

The following documentation will be required with the Bid Proposal Form. If this documentation is not submitted with the bid, the bid will be considered Non-responsive.

Proof is required that the Prime Contractor, if he/she is performing the cleaning/painting operation, and any cleaning/painting Subcontractors are certified by the Steel Structures Painting Council (SSPC) Painting Contractor Certification Program (PCCP) QP-1 and QP-2. Such certification shall be for the duration of the project.

3/17/09

#### **APPENDIX A**

# OCCUPATIONAL SAFETY AND HEALTH STANDARD FOR OCCUPATIONAL EXPOSURE TO LEAD DURING CONSTRUCTION

The regulations specified under the following topics and as described herein shall be followed by the Contractor, engaged in removing and cleaning lead base paint from the steel structures. This Appendix is considered as part of the Special Provisions for Items 605629 and 605533 - Cleaning Existing Steel Structures and 605614 and 605618 - Cleaning Existing Steel Structures with Vacuum Power Tools.

.01	Scope and Application
.02	<del>Definitions</del>
.03	Permissible Exposure Limit (PEL)
.04	Initial Determination and Exposure Monitoring
.05	Methods of Compliance
06	Respiratory Protection
.07	Protective Work Clothing and Equipment
08	Housekeeping
<del>9</del>	Hygiene Facilities and Practices
.10	Medical Surveillance Program
11	Medical Examinations and Consultations
.12	Medical Removal Protection
.13	Employee Information and Training
.14	Signs
15	Recordkeeping
.16	Observation of Monitoring

#### .01 Scope and Application

- A. This Appendix applies to occupational exposure to lead of every employee engaged in construction work. Each employer shall protect the employment and places of employment of each employee engaged in construction work by complying with the Appendix.
- B. Compliance with this Appendix does not preclude or preempt the applicability of any other regulations or standards.

#### .02 Definitions

For the purpose of this Appendix certain words and terms are defined as follows.

#### A. Lead

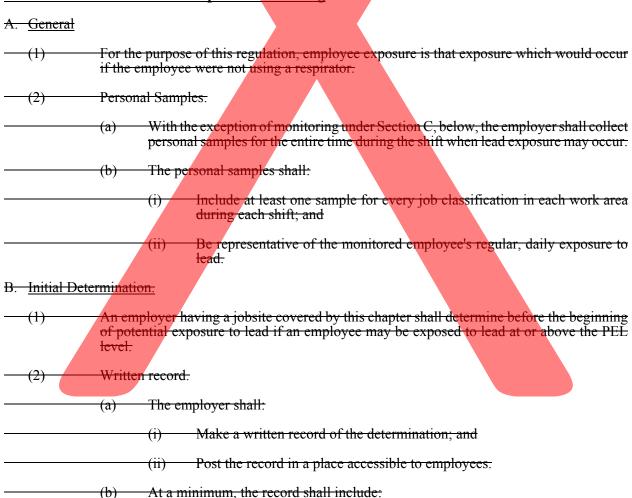
- (1) "Lead" means metallic lead, all inorganic lead compounds, and organic lead soaps.
- (2) "Lead" does not include any other organic lead compounds.

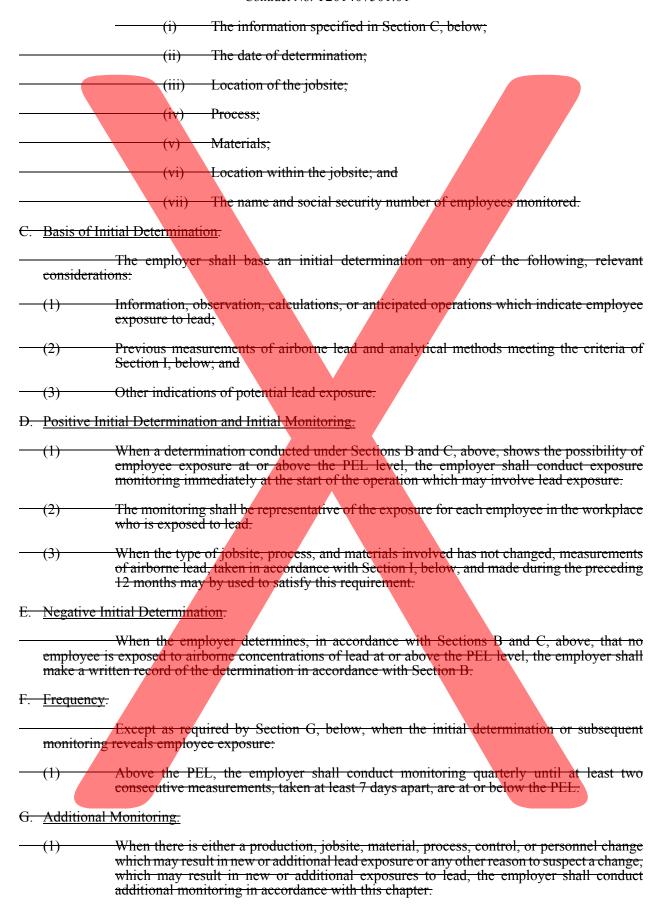
- B. "PEL" means Permissible Exposure Limit.
- C. "TWA" means Time Weighted Average.
- D. All references to "the Employer" herein shall mean "the Contractor", and all references to the Employee(s) shall mean "the Department's and Contractor's Employees".

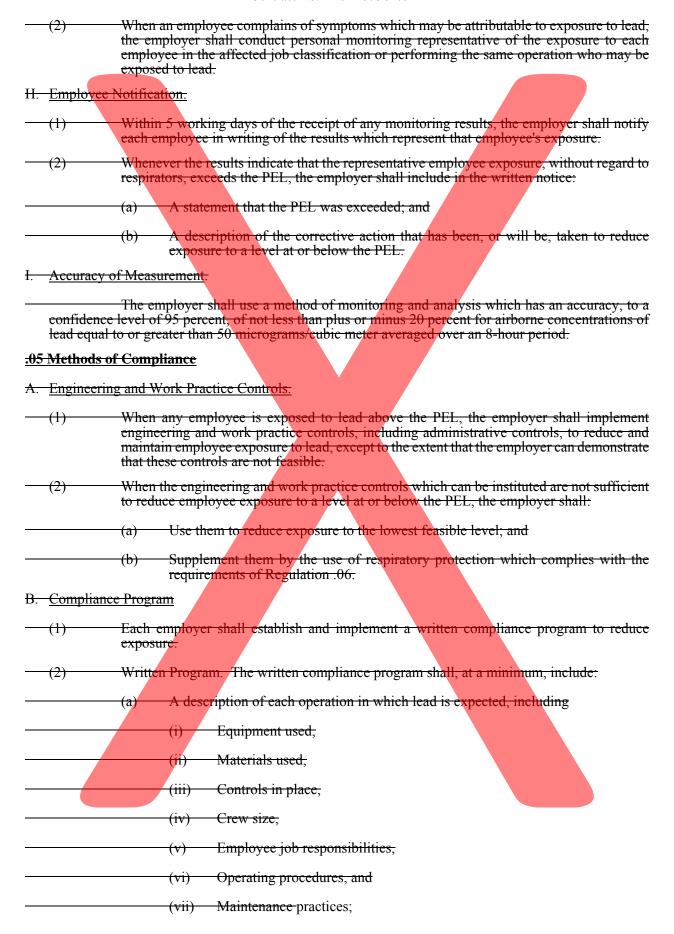
#### .03 Permissible Exposure Limit (PEL)

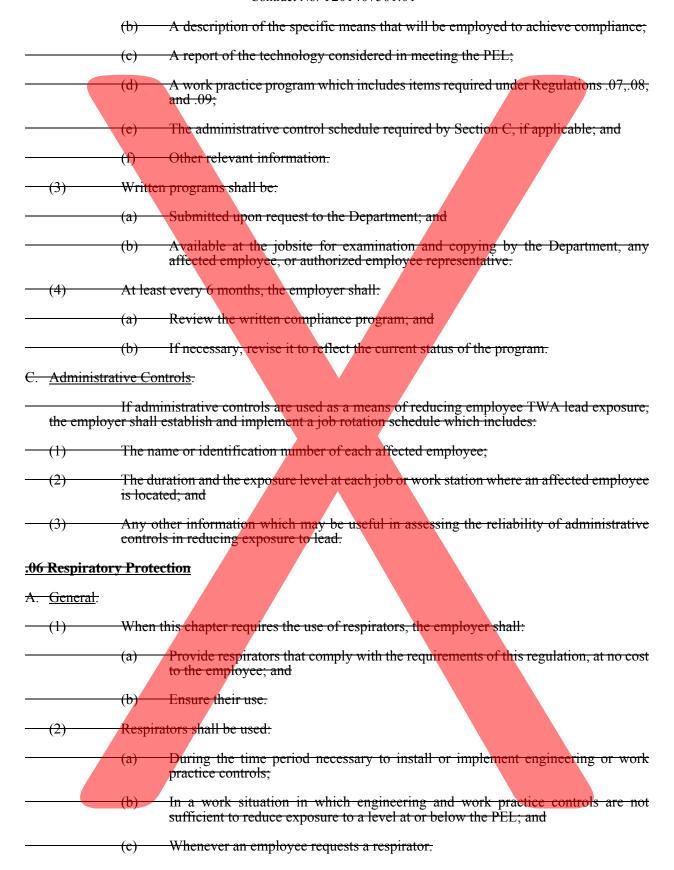
- A. The employer shall ensure that no employee is exposed to lead at concentrations greater than 50 micrograms per cubic meter of air averaged over an 8-hour period.
- B. When an employee is exposed to lead for more than 8 hours in any work day, the employer shall use the following formula to reduce the permissible exposure limit, as a time weighted average (TWA) for that day: Maximum permissible limit (in micrograms/cubic meter) = 400 divided by hours worked in the day.
- C. <u>Respirators</u>. When respirators are used to supplement engineering and work practice controls to comply with the PEL and in accordance with the requirements of Regulation .06, the employer, for the purpose of determining compliance with the PEL, may:
- (1) Consider employee exposure to be at the level provided by the protection factor of the respirator for those periods the respirator is worn; and
- (2) Average those periods with exposure levels during periods when respirators are not worn to determine the employee's daily TWA exposure.

#### .04 Initial Determination and Exposure Monitoring







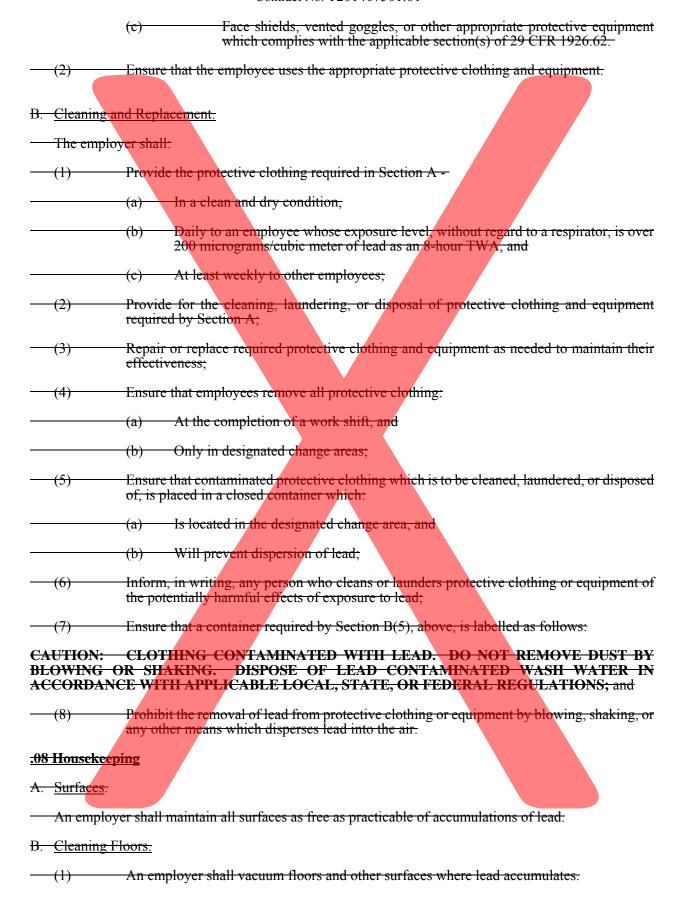


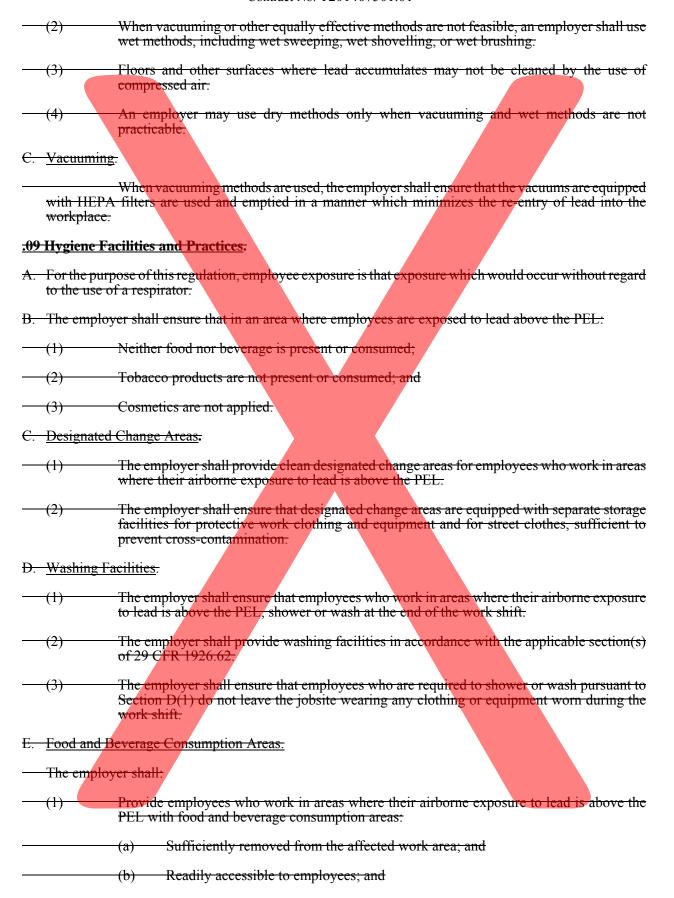
#### B. Respirator Selection. When a respirator is required under this chapter, the employer shall select the appropriate <del>(1)</del> respirator or combination of respirators in accordance with this section from Table I. Respiratory Protection for Lead Aerosols. Powered Air-Purifying Respirators: The employer shall provide a powered air-purifying respirator instead of the respirator specified in Table I Respiratory Protection for Lead Aerosols whenever: (a) An employee chooses to use this type of respirator; and This respirator will provide adequate protection to the employee. (3)The employer shall select respirators from among those approved for protection against lead dust, fume, and mist by the Mine Safety and Health Administration (MSHA) and the National Institute for Occupational Safety and Health (NIOSH) under the provisions of 30 CFR Part II. C. Respirator Usage. The employer shall ensure that the respirator issued to the employee: Exhibits minimum facepiece leakage; and <del>(b)</del> Is fitted properly. $\frac{(2)}{}$ Fit Test. For each employee wearing a negative pressure respirator, the employer shall perform either a quantitative or qualitative face fit test: At the time of initial fitting; and <del>(ii)</del> Minimally, every 6 months after that. <del>(b)</del> The qualitative fit test: May be used only to test the fit of a half-mask respirator when it is <del>(i)</del> otherwise permitted to be worn; and Shall be conducted in accordance with the directive set in 29 CFR 1926.62. The tests shall be used to select facepieces that provide the protection prescribed in Table I. Respiratory Protection for Lead Aerosols. TABLE I. RESPIRATORY PROTECTION FOR LEAD AEROSOLS Airborne concentration of lead or Required respirator<sup>†</sup> condition of use Not in excess of 0.5 milligram/cubic Half-mask, air-purifying respirator equipped with high efficiency filters.<sup>2</sup> meter (10X PEL). Not in excess of 1.25 milligram/cubic meter Hood or helmet supplied air respirator (25 x PEL) operated in a continous flow mode. Not in excess of 2.5 milligram/cubic (1) Full facepiece, air-purifying respirator with

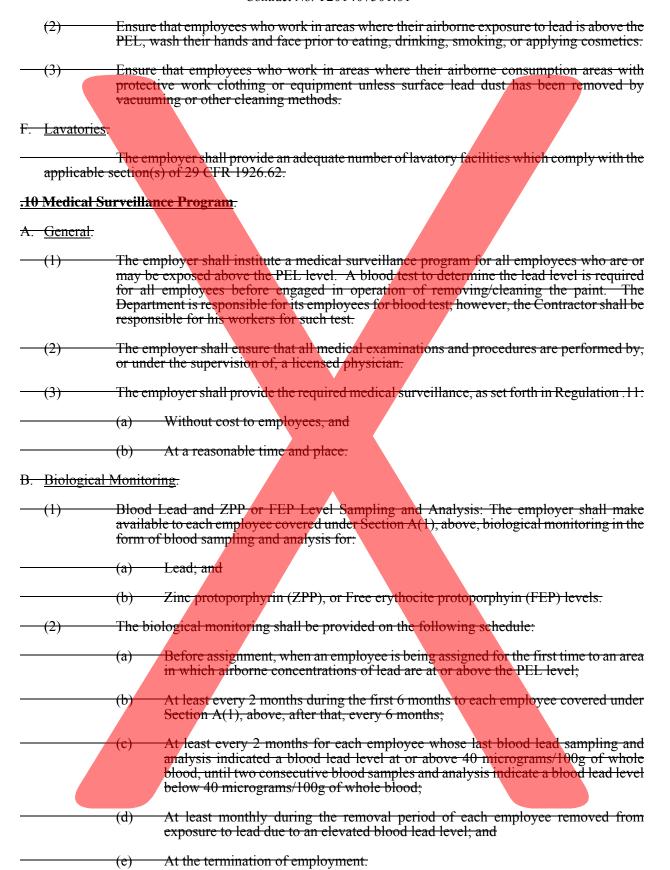
high efficiency filters.3

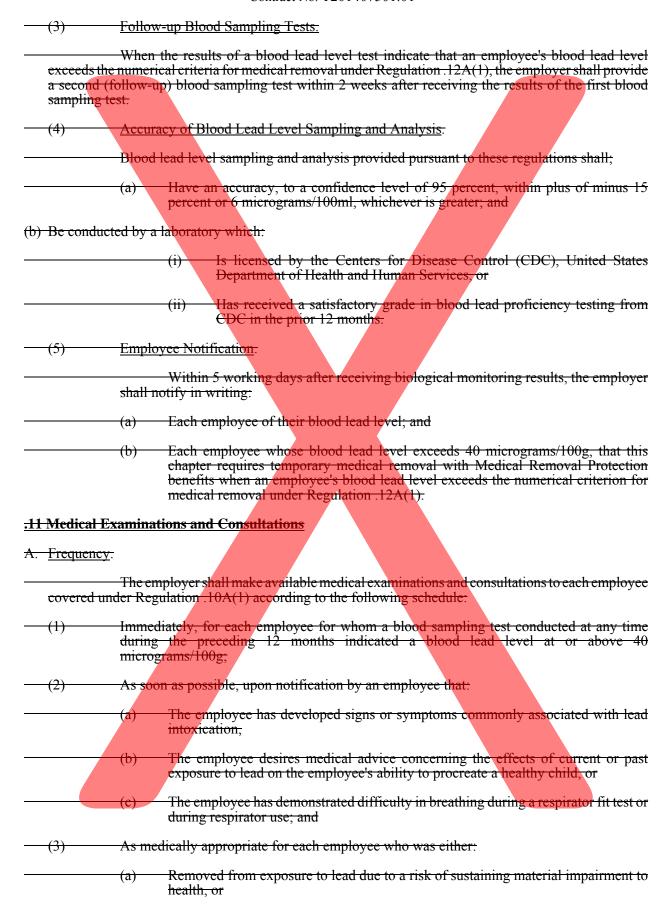
meter (50X PEL).

	(2) Any powered, air-purifying respirator with high efficiency filters.3-
Not in excess of 50 milligram/cubic meter (1000x PEL).	Half-mask, supplied-air respirator operated in positive-pressure mode <sup>2</sup> .
Not in excess of 100 milligrams/cubic meter (2000X PEL).	Supplied-air respirators with full facepiece, hood, helmet, or suit, operated in positive pressure mode.
Greater than 100 milligrams/cubic meter, unknown concentration or fire fighting.	Full facepiece, self-contained breathing apparatus operated in positive-pressure mode.
**Respirators specified for high concentration	ns can be used at lower concentrations of lead.
— <sup>2</sup> Full facepiece is required if the lead acroso	ls cause eye or skin irritation at the use concentrations.
<sup>3</sup> A high efficiency particulate filter mea particles.Certain Specific Type CE blast hel	nns 99.97 percent efficiency against 0.3 micron size mets can be used in atmospheres that are 1000x PEL.
shall make available to the emplo	y in breathing during the fit test or during use, the employer over an examination in accordance with Regulation .11A(2) ree can wear a respirator while performing the required duty.
D. Respirator Program.	
(1) The employer shall institute a applicable section(s) of 29 CFR	respiratory protection program in accordance with the 1926.62, 29 CFR 1926.1127, and 29 CFR 1910.134.
— (2) The employer shall:	
(a) Permit an emplo when an increase	byee who uses a filter respirator to change the filter elements se in breathing resistance is detected;
	ion of filters, cartridges and canisters with NIOSH color Habels as required.
(c) Maintain an add	equate supply of filter elements for this purpose; and
his or her face	oyee who wears a respirator to leave the work area to wash and respirator facepiece when necessary to prevent skin ated with respirator use.
<del>29CFR 1910, 2</del>	g - Records must be kept and available in accordance with 0 and include medical evaluation, fit testing, and a copy of protection program.
.07 Protective Work Clothing and Equipment	<u>t</u>
A. Provision and Use.	
When an employee is exposed to or when the possibility of skin or eye irritati	lead above the PEL, without regard to the use of respirators, on exists, the employer shall:
(1) Provide, at no cost to the employence such as, but not limited to:	byee, appropriate protective work clothing and equipment,
(a) Coveralls or similar full	l-body work clothing:
(b) Shoes or disposable sho	be coverlets, gloves, and hats;

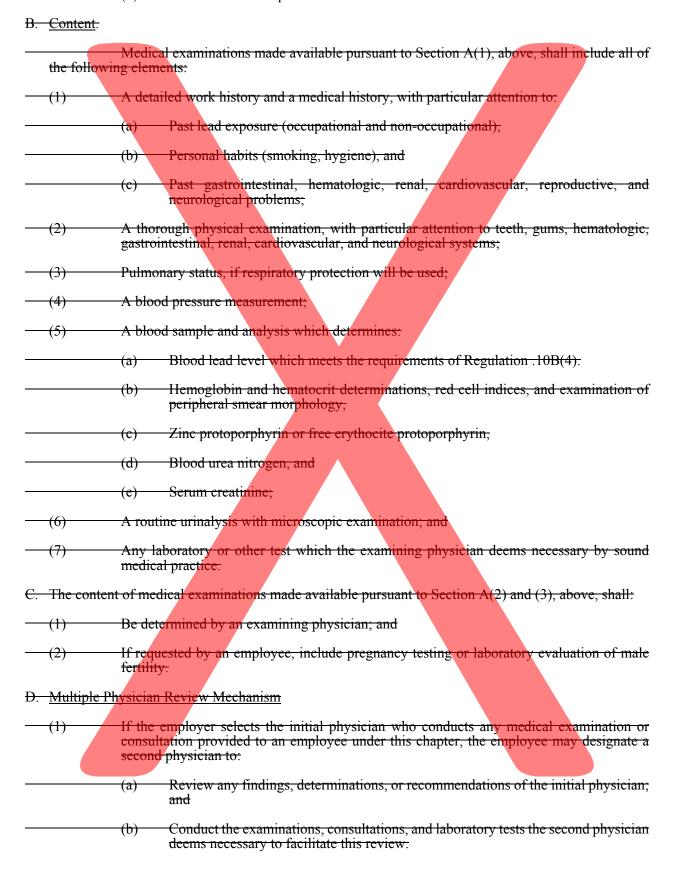


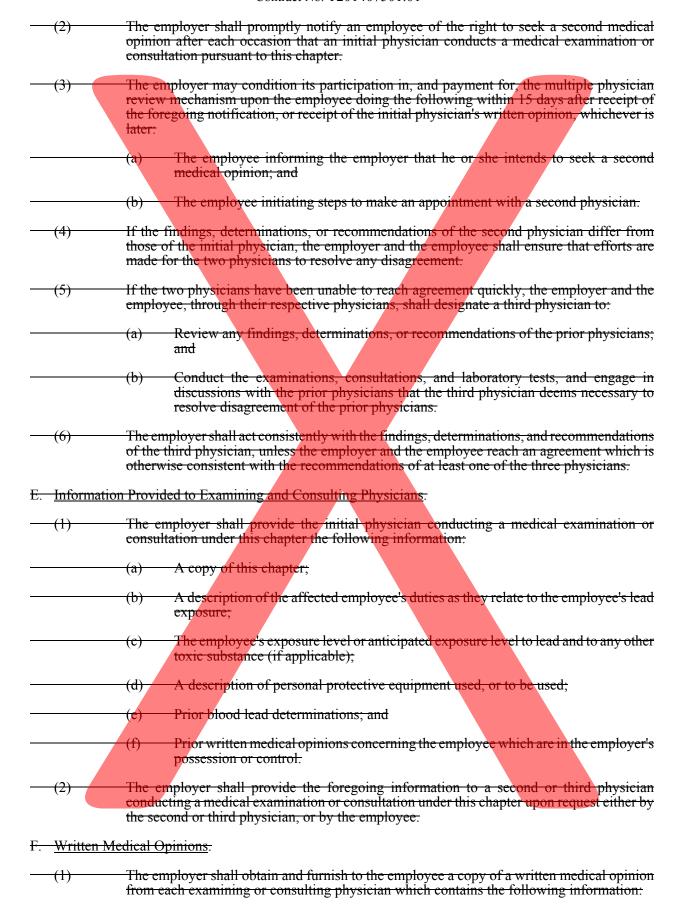


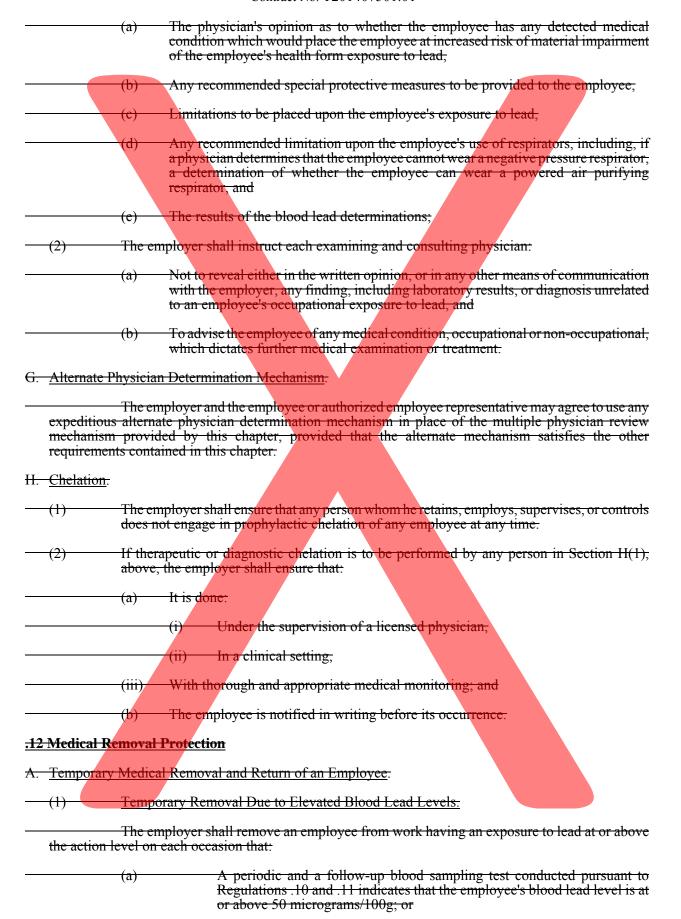


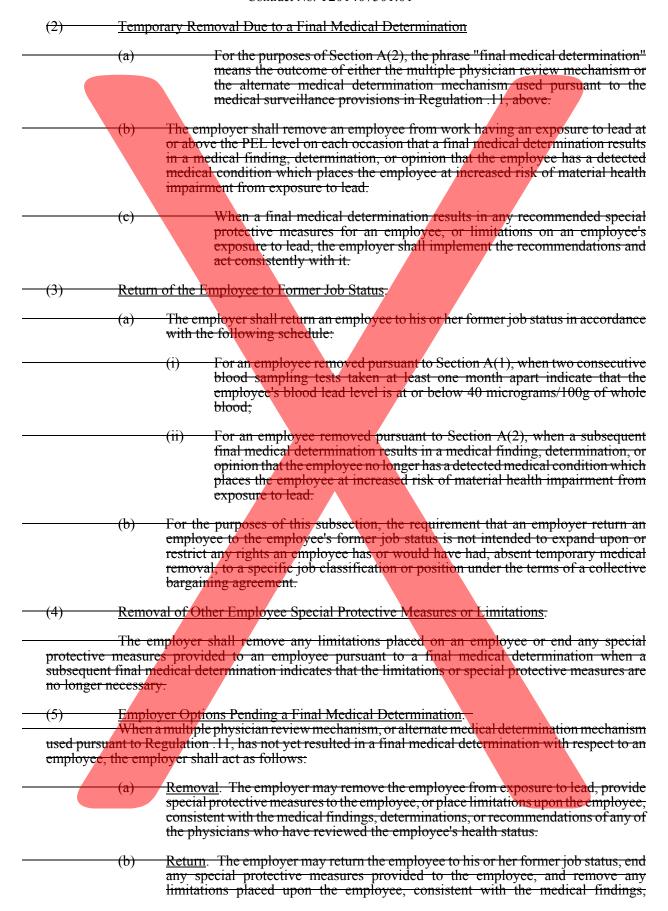


(b) Otherwise limited pursuant to a final medical determination.

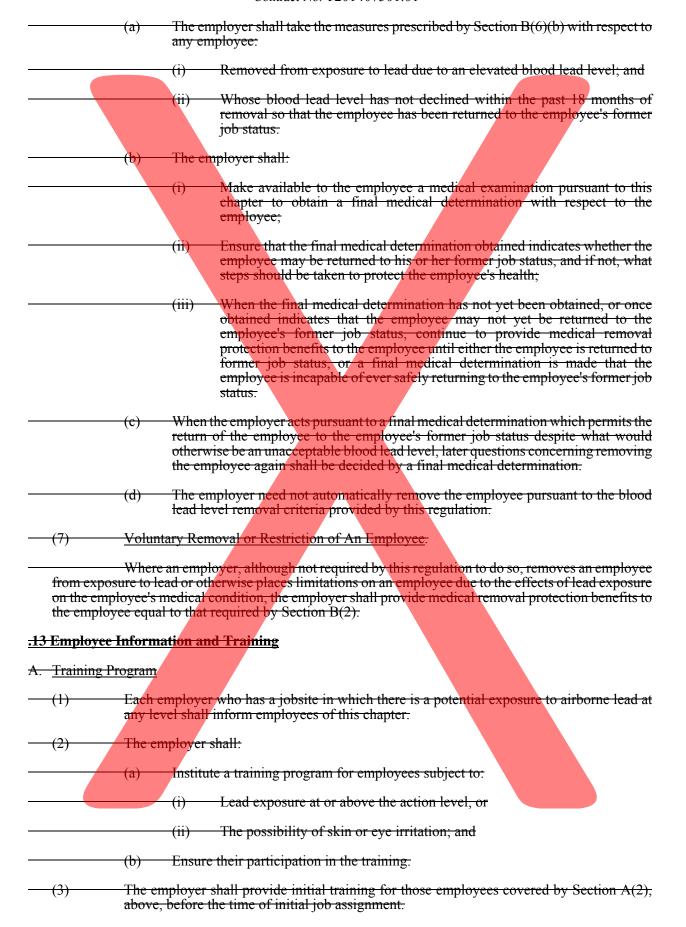


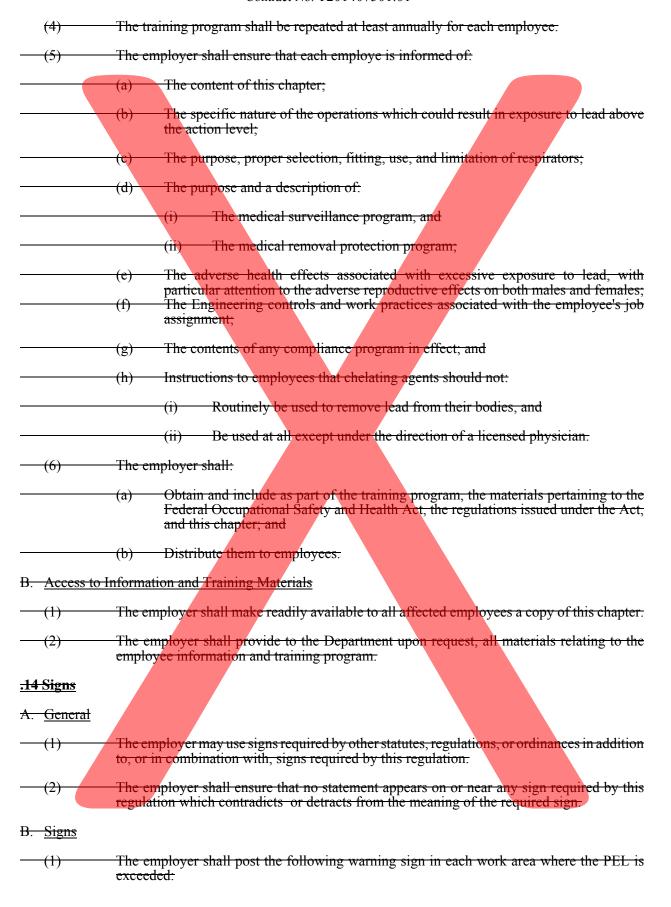






determinations, or recommendations of any of the physicians who have reviewed the employee's health status, with two exceptions: If the initial removal, special protection, or limitations of the employee resulted from a final medical determination which differed from the findings, determinations, or recommendations of the initial physician; or If the employee has been on removal status for the preceding 18 months due to an elevated blood lead level, the employer shall await a final medical determination. B. Medical Removal Protection Benefits. Definition of Medical Removal Protection Benefits. For the purpose of this section, the requirements that an employer provide medical removal protection benefits means that an employer shall maintain the carnings, seniority, and other employment rights and benefits of an employee as though the employee had not been removed from normal exposure to lead or otherwise limited. Provision of Medical Removal Protection Benefits The employer shall provide to an employee up to 18 months of medical removal protection benefits on each occasion that an employee is removed from exposure to lead or otherwise limited pursuant to this chapter. Follow-up Medical Surveillance During the Period of Employee Removal or Limitation. During the period of time that an employee is removed from normal exposure to lead, or otherwise limited, the employer may condition the provision of medical removal protection benefits upon the employee's participation in follow-up medical surveillance made available pursuant to this regulation. Workers' Compensation Claims. If a removed employee files a claim for workers' compensation payments for a leadrelated disability: The employer shall continue to provide medical removal protection benefits pending <del>(a)</del> disposition of the claim: <del>(b)</del> To the extent that an award is made to the employee for earnings lost during the period of removal, the employer's medical removal protection obligation shall be reduced by the amount of the award; and The employer shall receive no credit for workers' compensation payments received by the employee for treatment-related expenses. Other Credits The employer's obligation to provide medical removal protection benefits to a removed employee shall be reduced to the extent that the employee receives Compensation for earnings lost during the period of removal either from a publicly <del>(a)</del> or employer-funded made possible by virtue of the employee's removal. Income from employment with another employer compensation program; or Employees Whose Blood Lead Levels Do Not Adequately Decline Within 18 Months of <del>(6)</del> Removal.

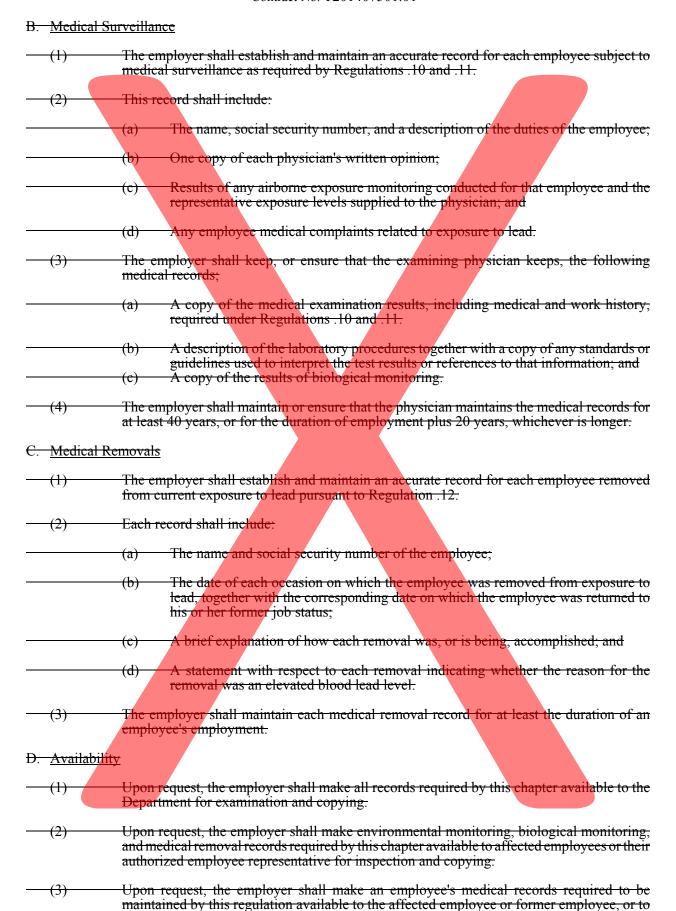




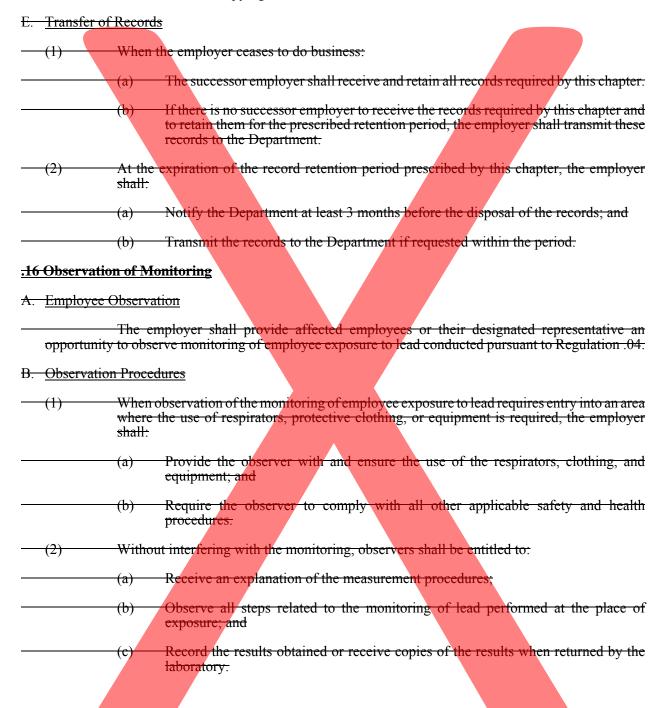
# WARNING HAZARD **LEAD WORK AREA** NO SMOKING, EATING OR DRINKING The employer shall ensure that signs required by this regulation are illuminated and cleaned as necessary so that the legend is readily visible. .15 Recordkeeping A. Initial Determination and Exposure Monitoring The employer shall establish and maintain an accurate record of: Initial determinations; and All monitoring required in Regulation .04. This record shall include: <del>(2)</del> The information required in Regulation .04; <del>(a)</del> For each sample taken: <del>(i)</del> The date, or dates, The number of samples, The duration of sampling. (iii) (iv) The location. The results on each sample taken, and Where applicable, a description of the sampling procedure used to determine representative employee exposure; A description of the sampling and analytical methods used and evidence of their <del>(c)</del> accuracy; The type of respiratory protective devices worn, if any: <del>(d)</del> Name, social security number, and job classification of the employee monitored and <del>(e)</del> of all other employees whose exposure the measurement is intended to represent; The environmental variables that could affect the measurement of employee exposure. The employer shall maintain the initial determination and exposure monitoring records for the longer of: <del>(a)</del> 40 years; or

The duration of employment plus 20 years.

<del>(b)</del>



a physician or other individual designated by the affected or former employee for examination and copying.



## DELAWARE DEPARTMENT OF TRANSPORTATION

SCHEDULE OF ITEMS

PAGE: DATE:

CONTRACT ID: T201407501.01 PROJECT(S): T201407501

ONTRA	ACTOR :				
LINE NO	TTEM DESCRIPTION	APPROX.	UNIT PRICE	BID AMOUNT	
	 	•	DOLLARS   CTS	DOLLARS CTS	
SECTIO	ON 0001 NON-FIXED QUANTIT	IES			
	201000 CLEARING AND  GRUBBING 	  LUMP	  LUMP	   	
	202000 EXCAVATION AND  EMBANKMENT 	   50.000  CY	   	   	
0030	207500 COFFERDAMS   	  LUMP 	  LUMP	   	
0040	209002 BORROW, TYPE B 	   10.000  CY	   	 	
0050	209006 BORROW, TYPE F 	   110.000  CY	   	 	
0060	211000 REMOVAL OF  STRUCTURES AND  OBSTRUCTIONS	  LUMP	  LUMP	   	
0080	712021 RIPRAP, R-5   	   1210.000  TON		   	
0090	720050 GALVANIZED STEEL  BEAM GUARDRAIL, TYPE  1-31	   112.500  LF		   	
0100	726001 END ANCHORAGE 31   	   1.000  EACH	   	   	

# DELAWARE DEPARTMENT OF TRANSPORTATION PAGE: SCHEDULE OF ITEMS DATE:

CONTRACT ID: T201407501.01 PROJECT(S): T201407501

CONTRA	ACTOR :			
LINE	1	APPROX.   QUANTITY   AND UNITS	UNIT PRICE     DOLLARS   CTS	   BID AMOUNT     DOLLARS  CTS
	  743000 MAINTENANCE OF  TRAFFIC 	<u>-</u> 	LUMP	DOLLARS   C15
0120	743006 PLASTIC DRUMS   	   952.000  EADY	 	 
	743023 TEMPORARY  BARRICADES, TYPE III 	   408.000  LFDY	  -  -	  - 
	743024 TEMPORARY WARNING  SIGNS AND PLAQUES 	   408.000  EADY	   	 
	743051 FLAGGER, KENT  COUNTY, STATE 	   320.000  HOUR	     	   
	743063 FLAGGER, KENT  COUNTY, STATE, OVERTIME 	   80.000  HOUR		   
	749687 INSTALLATION OR  REMOVAL OF TRAFFIC  SIGN(S) ON SINGLE SIGN  POST	   9.000  EACH	     	
0180	749690 INSTALLATION OR  REMOVAL OF TRAFFIC SIGNS  ON MULTIPLE SIGN POSTS	   8.000  SF	   	   
	758000 REMOVAL OF  EXISTING PORTLAND  CEMENTCONCRETE PAVEMENT,  CURB, SIDEWALK, ETC.	   75.000  SY	       	
	762001 SAW CUTTING,  BITUMINOUS CONCRETE 	   150.000  LF		     

### DELAWARE DEPARTMENT OF TRANSPORTATION

SCHEDULE OF ITEMS

PAGE: DATE:

CONTRACT ID: T201407501.01

PROJECT(S): T201407501

LINE	ITEM   DESCRIPTION 	APPROX.	UNIT PRICE	BID AMOUNT	
NO		20111111	DOLLARS   CTS	DOLLARS CTS	
	762002 SAW CUTTING,  CONCRETE, FULL DEPTH	   25.000  LF	     	   	
0220	763000 INITIAL EXPENSE   	  LUMP 	  LUMP 		
	763501 CONSTRUCTION  ENGINEERING	  LUMP 	    LUMP	   	
0240	905001 SILT FENCE   	   250.000  LF	   	   	
	906001 PORTABLE SEDIMENT  TANK 	   2.000  EACH	   	   	
0260	906003 SUMP PIT 	   2.000  EACH	   	   	
0270	908001 TOPSOIL (TON) 	   115.000  TON	   	   	
0280	908004 TOPSOIL, 6" DEPTH 	   700.000  SY		   	
	908017 TEMPORARY GRASS  SEEDING	   1400.000  SY		   	
	908019 STREAMBANK SEED  MIX, SEEDING				

#### DELAWARE DEPARTMENT OF TRANSPORTATION

SCHEDULE OF ITEMS

PAGE: DATE:

CONTRACT ID: T201407501.01

PROJECT(S): T201407501

CONTRA	ACTOR :					
LINE	:	APPROX.	UNIT PRICE		BID AMOUNT	
NO	DESCRIPTION 	QUANTITY   AND UNITS	   DOLLARS	CTS	   DOLLARS	CTS
0310	908020 EROSION CONTROL  BLANKET MULCH	   965.000  SY	   		   	
0320	909004 TURBIDITY CURTAIN,  FLOATING	   400.000  LF	   		   	
	   SECTION 0001 TOTAL		   			
	   TOTAL BID 		   	. – – – – -		